

CITY OF SACRAMENTO

Sacramento River Water Treatment Plant

**FACILITY POLLUTION PREVENTION PLAN
(FPPP)**

Responsibility for FPPP Implementation:

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1.0 INTRODUCTION

The National Pollution Discharge Elimination System (NPDES) Storm Water Permit, administered by the Central Valley Regional Water Quality Control Board (Water Board), requires the City of Sacramento to regulate urban runoff entering into the storm drainage system and local waterways. The purpose of the permit is to protect water quality by reducing the amount of pollutants in the storm water from various urban land uses and activities. There are numerous programs being implemented by the City's Stormwater Quality Improvement Program (Stormwater Program) including those that minimize storm water pollution from new developments, construction sites, commercial and industrial facilities, and municipal activities.

To address potential pollutants entering the drainage system from public facilities containing material storage, vehicle/equipment maintenance, and vehicle/equipment washing activities, the City of Sacramento will implement pollution prevention measures as described within a Facility Pollution Prevention Plan (FPPP).

1.1 Purpose of the Facility Pollution Prevention Plan (FPPP)

The FPPP provides an extensive evaluation of Sacramento River Water Treatment Plant for potential activities that may result in storm-water-pollutant runoff and offers solutions to the problems presented. The FPPP is intended to serve as a blue print for implementation of best management practices (BMPs) to control pollutants within the site's runoff to the maximum extent practicable. The individual(s) responsible for the implementation of the FPPP will be identified, and Stormwater Program staff will inspect the facility annually to ensure proper BMP implementation.

1.2 Storm Water Audit at Sacramento River Water Treatment Plant

A storm water audit was conducted at Sacramento River Water Treatment Plant by Stormwater Program staff from the Department of Utilities/Engineering Services on October 22, 2008. The audit addressed the following areas: activities performed at the site, materials used and stored inside and outside, equipment and vehicles stored inside and outside, spill clean-up equipment, drainage system, and general comments.

1.3 Updating the FPPP

Initially, FPPPs will be updated annually during the first three years of implementation in order to address challenges and transitions. After the first three year period, updating will occur on an as needed basis (at least once per permit term) to reflect changes in activities that may adversely affect or improve storm water runoff. Any changes to the FPPP shall include the individual responsible for FPPP implementation (see cover), and Stormwater Program staff. The individual responsible for FPPP implementation shall review and request modifications to this FPPP from Stormwater Program staff as necessary to maintain conformance with actual practices and site layout.

2.0 DESCRIPTION OF SITE AND POTENTIAL SOURCES OF POLLUTION

Chapter Two contains: general information collected during the site audit, a description of NPDES regulated activities, and identification of potential pollution sources.

2.1 *General Nature of Facility Activities*

This facility is a conventional water treatment plant. Pre-treatment includes pre-chlorination, grit removal, coagulation flocculation and sedimentation. The water is then filtered and disinfected a second time. Post-treatment includes pH adjustment and fluoridation. A list of specific activities includes, but is not limited to:

- Pumping raw surface water from the Sacramento River for the purpose of municipal drinking water treatment
- Removing solids from the surface water
- Handling (drying and disposing of) water treatment plant residual solids
- Cleaning filtration system backwash water or filter wash water
- Storage of chemicals used to treat water
- Treatment of the water with chemicals
- Storage of treated water
- Maintenance of equipment
- Metal fabrication and machining activities for the purpose of maintenance of water treatment plant equipment and facilities
- Laboratory testing of water and related chemicals
- Administration

2.2 *Facility Layout and Specific Activities*

A map delineating the location of structures and their immediate surroundings, including drainage, landscaping, and storage areas are shown in Appendix A. Sacramento River Water Treatment Plant covers approximately 40 acres, and is approximately 70% impervious. Over 40% of the site collects and generally contains rain water in the normal water treatment process. Almost 60% is normally piped directly to the Sacramento or American River.

The following describes structures found at this location:

5 MG Filtered Water Storage (Reservoir 1) (G/7) This is the original underground structure where the treated water is stored and released into the City water distribution system. Diluted spent lime is transferred from the reservoir to the Sludge Lagoons. This structure also includes high lift pump stations.

9.5 MG Filtered Water Storage (Reservoir 2) (J/8) This is an above-ground structure where the treated water is stored and released into the City water distribution system. Diluted spent lime is

transferred from the reservoir to the Sludge Lagoons during triennial maintenance operations of the reservoir.

C/T Tank & Clearwell (Reservoir 3) (K/8) This is a 2.8 million gallon, split structure. The CT Basin is an underground portion of the structure where water is sent following filtration prior to going into Reservoirs 1 and 2. Chlorine is added to the water in the C/T Tank. Reservoir 3, the Clearwell, is the above-ground portion which also stores water prior to being released into the distribution system. Lime is added to the water in the Clearwell to adjust pH levels.

Alum and Caustic Soda Storage (G-H/2) See Hazardous Material Storage Area 6.

Boat Storage (H/6) Boats used for inspection and maintenance of the intake structure and collection of water monitoring samples are stored in this building.

Chemical Building (K-L/6-7) See Hazardous Material Storage Area 1.

Chemical Trench (Not shown on the site map) This is an entirely underground trench that is used to carry all chemical lines, electrical conduits, compressed air, utility water, sample lines, and the drain pipes for the drain water off of the Caustic Soda Storage and the Alum Storage containment areas. The trench begins in the Operations Building, heads west to the New 1 – 8 Filters, into the Chemical Building, then works its way south and west towards the Grit Basin area, and ends in the basement of the Coagulation Building. There are two sump areas, each with two pumps, for pumping spills that occur within the trench. The sump pumps discharges into the Plant Drain System which then flows into the FWW Lagoons. The Chemical Trench sumps are equipped with alarms and controlled by a Supervisory Control and Data Acquisition (SCADA) system for quick response to detected leaks and any pump failures within the trench.

Coagulation Building (G/2) See Hazardous Material Storage Area 5.

Electrical Building (F/7) See Outdoor Storage Area 3.

Filters (H-L/6) This includes the Old 1-8, Old 9-16, and New 1-8 filters and associated buildings. These structures filter the water from the Sedimentation Basins prior to chemical adjustments. Particles removed by the filters are transferred to the FWW Lagoons.

Filter Wash Water (FWW) Lagoons 1 & 2 (N/4-5) These structures were constructed of reinforced concrete (which has inherently low permeability), and constructed below grade with concrete walls extending above ground to prevent the contents from overflowing. The lagoons were designed to operate at a freeboard level designated by regulations (currently two feet), and levels are , at a minimum, visually monitored daily by staff gauges. Decant pumps automatically divert dewatered supernatant to the Flash Mix. Dilute alum residuals generated from the filter backwashing process is discharged to the FWW Lagoons for settling, decanting and solar drying. After the supernatant is decanted and the residuals begin to dry, it is mixed in the lagoon with a front-end loader to facilitate

drying. Best Management Practices (BMPs) are implemented to prevent track-out or migration of residual solids after mixing or loading/hauling operations (See BMP Summary Table in Chapter 3).

Flocculation/Sedimentation Basins (F-K/4) This includes the Basin 1, 2, and 3 Flocculation/Sedimentation Basins. The Flocculation/Sedimentation Basins are reinforced concrete structures where raw water conveyed from the Grit Basin is further treated. Sedimentation Basin 1 is covered, and the remaining basins are uncovered. Adding liquid aluminum sulfate (alum) and slow mixing to the treatment process allows for flocculation and sedimentation of suspended solids; this process creates an environment where suspended particles will stick together and sink. The flocculation and sedimentation process will remove only those particles that can settle within the detention time of the sedimentation basins; therefore, the water will then flow by gravity through the filters to further reduce the amount of suspended solids. Residuals are withdrawn from the bottom of basins 2 and 3, and sent to the Sludge Lagoons for drying and disposal. To remove residuals from Basin 1, the basin is emptied and manually cleaned; the residuals and waste water from basin one is sent to the sludge lagoons.

General Storage Building (F/6) This building stores pipes, fittings, valves, meters, and other miscellaneous plant parts and equipment. This building is directly connected to the High Service Pump Station.

Generator (F/6) This is the location of the backup generator that supplies electricity to the plant in the event of a power outage.

Grit Basin/Flash Mix Flow Split Structure (H-J/2) The Grit Basin is an above ground concrete structure. Water from the river is sent into this basin which is used to settle grit, sand and sediments. Approximately four to twenty cubic yards of solids are generated in the Grit Basin per week. At a point just prior to the Grit Basin, a pre-chlorination chlorine solution is introduced at a dose of 1.0 to 2.5 ppm (parts per million). After passing through the Grit Basin, water moves to the flash mixer, and into the plant. Residual waste from the Grit Basin is loaded into trucks and transported to the Sludge Lagoons. The truck loading area is covered and slopes to a drain that discharges to the sewer system.

Alum, chlorine, polymer, and caustic soda is added to the water in the Flash Mix portion of this structure. All chemical dosing procedures are based on the amount of incoming water being pumped. Water recycled from other parts of the process is also sent to the Flash Mix structure.

Head House (G/6) Contains a .25 MG storage of potable water for backwashing Old Filters 1-16. This structure also contains office spaces for City staff, a break room, locker facilities, and miscellaneous storage of process pumps, piping and equipment utilized for support of the water treatment process and for operation of Old Filters 1-16.

High Service Pump Station (HSPS) (F/6) This building houses the primary pumps that deliver

treated water from the reservoirs into the distribution system. The east and west sides of this building include general storage, lockers and a restroom for staff use. A flammable liquid cabinet is located inside the building near the northeast corner that provides containment for paint and primer stored therein.

Intake Structure (A/2) This structure stands in the Sacramento River and pumps water from the river directing it to the grit basin to begin the treatment process. All associated drainage associated with the intake structure goes directly to the Sacramento River, and runoff from the associated plaza flows into the storm drain system which discharges into the American River.

Machine Shop (F/7) Activities in this building include metal fabrication and welding. The purpose is to build the parts used throughout the facility. Welding and metal-fabrication equipment and associated supplies are utilized within this building. See Hazardous Material Storage 5 for hazardous materials stored in this building. Hosing of the pavement outside the machine shop was observed during the inspection, which runs-off along the surface to Bercut Drive and the public drainage system. Such discharges flow into a porous roadside ditch adjacent to Bercut Drive for several hundred feet before discharging into a drain inlet. The vegetated, roadside ditch provides filtration and infiltration for flows generated from rinsing activities performed in front of the Machine Shop, and such flows may infiltrate prior to entering underground drain pipes.

Oil Room (H-6) See Hazardous Material Storage Area 2.

Operations Building (L/6) This building is the primary location where plant operations are monitored and controlled. Primary uses include offices, control rooms, testing labs, conference/training rooms, and general administration. There is miscellaneous storage of plant parts in the basement of the Operations Building.

Sludge Lagoons 1, 2, 3 & 4 (K-M/4-5 & L-M/7-8) Sludge Lagoons 1, 2, and 3 are constructed and monitored similarly to the FWW Lagoons. Alum residuals from the Flocculation/Sedimentation Basins, and spent lime from Reservoirs 1, 2, and 3, are pumped to the Sludge Lagoons. The lagoons are dewatered using a top weir gate dewatering system, and decant is pumped and recycled into the Flash Mixer. Plumbing for discharge to the sanitary sewer system and to the drainage system exists, but the valve to the storm drainage system has been chained and locked to prevent accidental release to the storm drain system. Similar to the FWW Lagoons, residual solids are solar dried and mixed within the lagoons. Management of solids will be consistent with that mentioned in the above FWW Lagoons description.

Sludge Lagoon 4 is an earthen basin that was constructed above grade with 8-foot berms and 2.5 feet of freeboard. Similar to lagoons 1, 2, and 3, a top-weir-gate system is utilized for dewatering decant that is pumped and recycled in the Flash Mixer or discharged into the sanitary sewer. This basin is used for temporary storage of residuals that been removed from Sludge Lagoons 1, 2, and 3. The sludge may or may not be free-draining when transferred, and completes the drying process here

before being removed to an off-site landfill.

Sludge and FWW Lagoon Pump Station (M/5) This is the location that houses the Sludge Return (SLR) pumps, Sludge Decant (SLD) pumps, Wash Water Return (WWR) pumps, Wash Water Decant (WWD) pumps, Plant Drain pumps, and Storm Drain pumps. The purpose of these pumps are to take decant from sludge and recycle into the FWW, to take decant and recycle from FWW to the Flash Mix or sewer, to take flows from the plant drain system to the FWW Lagoons, and to take flows in the storm drain system to the Stormwater Swale.

South Barn Storage (K/2-3) This building houses miscellaneous equipment and supplies including portable pumps, hoses, compressors, paint (in flammable material cabinet on pallet), weed eaters, de-chlorination tablets, and chlorination granules.

Well Storage (F/6) This building houses well pumps and appurtenances.

The following section describes Hazardous Material Storage:

Hazardous Materials Storage Area 1 (L/6-7) is the Chemical Building. Inside this concrete building are storage tanks and associated pumping and piping equipment for chlorine gas, anionic and nonionic polymers, fluoride, caustic soda, and lime.. A Water Production Emergency Management Plan has been prepared for response to minor and major incidents. This building is divided into separate sections to accommodate each of the chemicals. Each section is equipped with particular precautionary measure for containment and alarms in case of a leak. Potential leaks and spills primarily occur within the containment area from storage tanks and associated pumping and piping of the individual chemical sections. Generally, the individual containment areas consist of a concrete pad tapered to flow to either a drain inlet that discharges to the Plant Drain System or a sump which hold the spill until properly disposed. The Plant Drain system has pumps which discharge flows from the Plant Drain System back into the FWW Lagoons where the WWR pumps decant water from the FWW Lagoons and pumps flow back to the Flash Mix structure.

Chlorine:

One-ton cylinders of gaseous chlorine are stored and used at this WTP; twelve cylinders are on-line or standby and stored on scales, and another twelve one-ton cylinders are stored on trunions. The danger of leaks is the most likely during change out of cylinders, a faulty or compromised gasket, or improperly placed connections. These types of leaks are rare and normally considered minor; however, a chlorine gas leak from these types of incidents can have a severe effect on local air quality, but may not necessarily impact water quality. The chlorine-storage area is equipped with an emergency chlorine scrubber and gas sensors. A red light attached to the outside of the building will illuminate and an audible horn will sound when a chlorine-gas leak is detected. The sensors will sound the alarm when a concentration of 1 ppm is detected, and the scrubber will be activated when a concentration of 2 ppm is detected. Also stored in the Chemical Building are 150-pound-chlorine cylinders (max of 14) used for numerous ground-water wells city wide. A Risk Management Plan

for Chlorine Handling has been implemented, and staff is trained annually.

Polymer:

There is a 750-gallon mixing tank, a 750-gallon ageing tank, 3 metering pumps and associated piping within a concrete secondary-containment structure. The mixing and aging tanks have floats that will sound an alarm if the fluid level rises above normal operating levels. The polymer tanks are equipped with an overflow pipe which will accommodate some overflow. In the event overflow exceeds the capacity of the overflow pipe, wet polymer will flow into the containment area. There are drains within the containment area which takes flow into the Plant Drain System.

Fluoride:

There are two fluoride 6000 gal. tanks, 2 metering pumps and associated piping within a concrete secondary-containment structure. The tanks are equipped with an electronic level and alarming system. The system is comprised of a light on the exterior of the building that illuminates and an alarm is sent to SCADA when the tank level exceeds normal operating levels. In the event of a leak, a float in the sump of the secondary-containment area sends an alarm to SCADA. There are no drains within the fluoride-containment area. Small leaks will be mechanically pumped by the operators and disposed of properly. In the event that there is a large spill, a trucking operation contracted with the City will respond to collect and transport the spill for proper disposal.

Caustic Soda:

The chlorine scrubber system has a 2 thousand gallon caustic soda storage reservoir. The entire system is within a concrete secondary-containment structure. The chlorine scrubber neutralizes chlorine gas leaks generated from the chlorine storage area, chlorinator room and the chlorinator repair shop. This scrubber section is not equipped with a leak detection system, but the containment area was designed for the total volume of the storage reservoir. Small leaks will be mechanically pumped by the operators and disposed of properly. In the event that there is a large spill, a trucking operation contracted with the City will respond to collect and transport the spill for proper disposal. The caustic soda section of the building is visually inspected once per shift.

Lime:

Another section of the Chemical Building consists of two 100,000 pound storage containers for lime. The lime is stored as powder, but then is slaked into a liquid form. There is no secondary-containment structure in this section of the building. Powder or liquid spills are hosed into the floor drains which discharges into the Plant Drain System. Large dry spills are swept up and disposed of properly. The lime section of the building is visually inspected once per shift.

Hazardous Materials Storage Area 2 (H-6) is known as the Oil Room. This room will contain several 55-gallon portable drums of: industrial oil, hydraulic oil, Engine oil, and gear compound. All new and used oil products for the site will be stored inside this building atop secondary containment pallets. Mobile drums are transported to and from other areas of the site as needed using mobile carts equipped with their own secondary containment. A spill kit is present.

Hazardous Materials Storage Area 3 (F/7) This storage area is located within the Machine shop. Hazardous materials stored in this building include gear lube, oxygen, compressed air, gold gas, propane, carbon dioxide, acetylene, and argon. The gasses are used for welding and metal fabrication.

Hazardous Materials Storage Area 4 (F/6) This is an Aboveground Storage Tank (AST) that was designed with double-walled containment. This tank stores fuel for a large diesel generator used primarily for emergency situations (power outages) so that the plant can continue to distribute water. The tank has a 6000-gallon capacity and usually contains less than 4000 gallons. There is a dispensing hose connected to the tank and can be used for daily refueling; however, it is not expected to be used for daily refueling. Occasionally, for rotating of fuel, the tank will be used for fueling of equipment.

Hazardous Materials Storage Area 5 (G/2) This is the Coagulation Building. Inside this concrete building are storage tanks and associate pumping and piping equipment for cationic polymer, alum, and Caustic Soda. Similar to the Chemical Building, this building is also separated into sections to accommodate each of the chemicals. Each section is equipped with particular precautionary measures for containment and alarms in case of a leak. Potential for leaks and spills primarily occurs within the associated pump and piping of the individual chemical sections. The individual containment areas consist of a concrete pad tapered to flow to a floor drain. Spill discharge to an attached outdoor containment area that can be pumped to the sewer. This outside containment area can hold several thousand gallons of spilled material and rain that falls directly into the containment area. Spilled liquid within the outside containment area is tested for pH prior to pumping into the sewer system. If the pH indicates that the spill is not appropriate for the sewer system, a contracted trucking operation will collect and properly dispose of the spill.

Aluminum sulfate:

Commonly referred to as alum. The alum-storage area consists of a 500-gallon day tank, three pumps and associated piping within a containment area. In the event of a spill wet alum will flow into the containment area. There are drains within the containment area which takes flow into the outside containment area.

Cationic Polymer:

There are several 250 gal. carboys, pumps, two 750 gal. mixing tanks, two 750 gal. aging tanks and associated piping within the containment area. The mixing and aging tanks have floats that will sound an alarm if the fluid level rises above normal operating levels. The polymer tanks are equipped with an overflow pipe which will accommodate some overflow. In the event overflow exceeds the capacity of the overflow pipe, wet polymer will flow into the containment area. There are drains within the containment area which takes flow into the outside containment area.

Caustic Soda:

Sodium hydroxide, commonly known as caustic soda, is used to adjust pH of the water. Adjustment of pH is necessary for the protection of the pipes within the plant and distribution system. <<further description>> Caustic soda inside the Coagulation Building is stored within 500-gallon day tanks<<containment area/precautionary measure description>>

Hazardous Materials Storage Area 6 (G-H/2) includes 5 large Alum and 2 Caustic Soda Tanks. Accidental spills and rainfall landing directly on the surrounding concrete pad is collected by drains that flow to the Coagulation Building's outside containment area. Spills from this location into the outside containment area handled the same as described in above.

The following outdoor storage areas are paved with asphalt or concrete:

Storage Area 1 (K/3-5) Is an outdoor storage area used for temporary storage of various pipes, fittings, wood and other general items. Items are stored all along the easterly edge of the Flocculation/Sedimentation Basins, and plant managers would like to not use this area for storage.

Storage Area 2 (F/6, J/6, L/6) Three locations where general refuse dumpsters are stored. The G/6 location is temporary, and will be removed shortly.

Storage Area 3 (F/7) Is used for storage of electrical equipment. The upper level houses the exposed plant transformer. The lower level provides covered storage for general electrical equipment. Scrap metal bins are stored uncovered immediately east of this storage structure.

Storage Area 5 (F/6) This storage area is covered. It is used to store small portable generators and a Bobcat immediately east of the well pump storage building.

The following section describes the parking lots at this facility:

Parking Area 1 (M-N/5-7) This parking area is used for employee and city vehicles as well as visitor parking. There are additional parking areas for City vehicles throughout the facility.

The following section describes the pervious areas of the facility:

Landscaped Areas:

Landscaped areas throughout the site include various grasses, trees, cobbles and shrubbery. Vegetation management is performed by contracted services operating under the maintenance provisions specified in the Landscape Maintenance Services General Specifications and Provisions. This document was updated in September 2008, and included Integrated Pest Management (IPM)

provisions for pest and vegetative management. The IPM program is intended to assure the quality and beauty of the facilities landscaping utilizing best horticultural/biological practices and least-toxic methods to facilitate a healthy landscape.

2.3 Description of Storm Drainage System

The site's storm drainage run-off flows to three different systems: The Sacramento/American Rivers, the plant drain system, and the public sanitary sewer system.

Sacramento & American River Runoff

The portion of the site that normally flows to the rivers totals over 22 acres,

- Approximately 3 acres along the westerly side of the site flows directly to Bercut drive where it runs northerly along the surface of a vegetated strip until it eventually combines with the freeway drainage system and gets pumped into Sump 111 which discharges into the American River just upstream of the confluence with the Sacramento River,
- About one acre, including a storm-water swale at the southwest corner, of the site is collected by drains connected to the up-stream end of a 30" pipe that discharges directly to the Sacramento River,
- About one-quarter acre located near the easterly entrance flows directly to the public drainage system in North "B" Street that eventually discharges to the American River,
- Half an acre or so along the north and northeast sides appears to flow through adjacent lots, and then to the aforementioned public drainage system,
- Over 7 acres in the central northern portion of the site flows to "The Moat", which surrounds the 9.5 MG water storage tank. The Moat is pumped into the site's primary storm drainage system, which includes another 10 +/- acres along the central eastern and southern portions of the site,
- That 17 acres flows to a sump at the northeast corner of Sludge Lagoon No. 3 where it is pumped to the aforementioned storm-water swale near the southwest corner of the site, which drains to the Sacramento River. In the event of a spill that contaminates the drainage in this 17 acre shed, the pumped flow can be redirected to the FWW Lagoons along with the plant drain system.

Plant Drain System Runoff

About 17 acres of storm runoff is collected by the various processes in the plant. Some of this collected rain water is treated in the normal treatment process. The remainder flows to the plant drain system. The plant drain system also collects flows from the chemical trench and inside buildings with interior drains that don't otherwise flow directly to the sewer.

The plant drain system normally pumps to the FWW Lagoons, but flows from the plant drainage system may be re-directed to the site's storm drainage system in an emergency. In such an event plant drain flows would discharge to the noted pond at the southwest corner of the site and then to the Sacramento River via the noted 30" pipe.

Public Sewer System Runoff

A couple small outdoor areas such as the Alum/Caustic Soda Storage and the Coagulation Building's outdoor containment areas discharge to the sanitary sewer system. The total area of storm water discharging to the public sewer includes about 0.1 acres.

2.4 Summary Table of Common Materials Used and Stored On-Site

Material	Purpose	Location	Likelihood of contact with storm water		
			High	Med	Low
Chlorine Gas	Treatment of the water (water disinfection)	Hazardous Material Storage Area 1 (Chemical Building), supernatant water and treated water			X
Compressed Air (nitrogen and oxygen)	Machine shop activities	Throughout the Plant			X
Acetylene, Argon, Carbon Dioxide, Oxygen, & Gold Gas (Argon & CO ₂ mixture)	Welding and cutting	Hazardous Material Storage Area 3 (Machine Shop)			X
Propane Gas	Forklift operation	Hazardous Materials Storage Area 3 (Machine Shop)			X
Hydrofluorosilic Acid and	Treatment of the water (water additive)	Hazardous Materials Storage Area 1 (Chemical Building)		X	
Lime	Treatment of the water (pH adjustment)	Hazardous Materials Storage Area 1 (Chemical Building) and lagoons		X	
Polymer	Treatment of the water (Aides in flocculation)	Hazardous Material Storage Area 1 (Chemical Building), Coagulation Building, and the lagoons		X	
Aluminum Sulphate (Alum)	Treatment of the water (aides in flocculation and filtration)	Hazardous Materials Storage Area 6 and Coagulation Building		X	
Sodium Hydroxide Solution (Caustic Soda)	Treatment of the water (chlorine adjustment)	Hazardous Material Storage Area 6, Coagulation Building, and the Chemical Building		X	
Polyaluminum Hydroxychloride (Multi component polymer blend)	Treatment of the water (aides in flocculation and coagulation)	Hazardous Materials Storage Area 5 (Coagulation Building)		X	
Various Oil Products (engine oil, industrial oil, hydraulic oil, etc.)	Equipment operation	Hazardous Material Storage Area 2 (Oil Room)		X	
Waste oil	Equipment operation	Hazardous Material Storage Area 2 (Oil Room)		X	
Gear Lube	Equipment operation	Hazardous Material Storage Area 2 (Machine Shop)		X	

Diesel	Fuel for the generator and loader	Hazardous Material Storage Area 4		X	
Steel	WTP equipment repair & maintenance	Machine Shop and Outdoor Storage Areas 3, 4, & 6	X		
Misc. Metals	WTP equipment repair & maintenance	Outdoor Storage Areas 1 and 4	X		
PVC glue	Miscellaneous WTP maintenance	Machine Shop			X
Wood	Miscellaneous WTP maintenance	Outdoor Storage Areas 1 and 6	X		

2.5 Preliminary List of Pollutants that may be found in Storm Water Runoff

Pollutant	Common Sources/Uses
pH	Elevated pH may result from masonry/concrete wastes, caustic soda, or lime releasing into drainage collection system. Low pH can result from a chlorine, fluoride or liquid aluminum sulfate spill releasing into the drainage collection system, or improper handling of battery acids.
Nutrients (compounds that contain nitrogen, phosphorous and potassium)	Detergents from vehicle & equipment washing and steam cleaning. Dumping of janitorial wastewater. Over irrigation of fertilized landscape.
Oil, Grease, Petroleum & Hydrocarbons	Vehicle & equipment parking, fueling, washing, steam cleaning, and repair. Outdoor loading & unloading of materials, and waste handling & disposal.
Bacteria	Waste handling & disposal (Dumpsters)
Metals (problematic metals dissolved in water include chromium, copper, lead, and Zinc. Other metals specific to water treatment processes include lead, manganese, molybdenum, silver, and thallium)	Vehicle & equipment parking, outdoor loading & unloading of materials, and waste handling & disposal. Mostly associated with motor vehicles, including direct atmospheric deposition from exhaust emissions, dripping or improperly transferred oil and lubricants, tire wear, brake lining wear and degradation of pavement. Other metals associated with the water treatment plant are derived from accidental discharges during solids handling /transport, mechanical failure of decant system (equipment, piping, and pumps), or overflow of the lagoons.
Sediment (Total Suspended Solids/Total Dissolved Solids)	Vehicle & equipment washing and steam cleaning, exposed landscaped areas, accidental discharge from drying lagoons, and accumulated debris within parking areas
Oxygen-Demanding Substances (Organic compounds)	Vehicle & equipment washing and steam cleaning, and waste handling & disposal. Generally occurs from improperly discarded wash water, litter and garbage, and leaking garbage bins.
Synthetic Organics (Adhesives, cleaners, sealants, solvents, etc.)	Vehicle & equipment fueling, washing, steam cleaning, and repairs. Outdoor loading & unloading of materials, and waste handling & disposal.
Gross Pollutants (trash, debris, floatables)	Outdoor loading & unloading of materials, and waste handling & disposal.

3.0 STEPS TO REDUCE NON-STORM WATER DISCHARGES

This section takes a look at the existing measures being implemented, either by design or coincidence that are preventing or reducing storm water pollution. Based on the existing measures and the priority pollutant sources identified in the above section, new Best Management Practices (BMPs) are identified and an implementation schedule is established.

3.1 Implementation Schedule

All non-structural BMPs (those that do not involve any major construction) should be implemented as soon as possible after approving this plan. Any structural BMPs should be evaluated and budgeted for in the following fiscal years.

3.2 BMP Summary Table

The following table provides a summary of the existing and new BMPs and indicates the schedule of implementation.

BMP	PRIORITY	CURRENT BMPS	NEW BMPS	IMPLEMENTATION SCHEDULE		
				FY 09	FY 10	FY 11
Good Housekeeping Practices (storage, use, and cleanup):						
Areas are kept clean and organized. Remove accumulated debris in a timely fashion, and sweep indoor work areas regularly.	2	X				
Avoid hosing down outside work areas discharging to the drainage system.	2	X				
Keep parking areas free from trash and debris.	2	X				
Dispose of used fluids, wash water, sweepings, and other debris properly.	1	X				
Proper Storage of Hazardous Materials/ Wastes - Covered and /or Secondary Containment	1	X				
Dispose of all waste materials according to applicable laws and regulations.	2	X				
Keep janitorial and maintenance oriented chemicals in their original containers, and keep them well labeled.	2	X				
Discard janitorial oriented wash water to the sanitary sewer.	1	X				
Check dumpsters on a regular basis for leaks, and keep lids closed during the rain season (October 1 – May 1).	2		X	X		
Indoor and Outdoor storage containers are checked for damage or leaks on a monthly basis.	2	X				
Ensure storm drain stenciling/markings are installed and legible.	3		X		X	
Clean targeted storm drain inlets & leads once prior to the rain season.	2		X			

BMP	PRIORITY	CURRENT BMPS	NEW BMPS	IMPLEMENTATION SCHEDULE		
				FY 09	FY 10	FY 11
Facility and Equipment						
Switch to low-toxic chemicals for facility maintenance when possible.	3	X				
Minimize use of solvents. Clean parts without using solvents whenever possible.	2	X				
Prohibit the discharge of wastes, including supernatant water and residuals/sludge, to surface waters or drainage collection system.	1	X				
Operate all systems and equipment to optimize the quality of the waste discharged to the lagoons.	2	X				
All treatment, storage, and disposal facilities are designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.	3	X				
All lagoons maintain regulated freeboard levels to prevent overflow, and visual monitoring of staff gauges is performed to ensure freeboard levels are maintained.	1	X				
The concrete liner of each pond and lagoon is inspected at least once per year for cracking, spalling or other damage.	2	X				
Equipment is properly maintained to reduce the potential for negative environmental impacts.	2	X				
Whenever visible tracking occurs on the roadway between sludge lagoon areas, a street sweeper is brought in to clean debris to prevent it from entering the storm drain	2	X				
The front loader is hosed down in lagoons to minimize tracking.	3	X				
Security Measures						
Facility is fenced and equipped with a security gate and security cameras.	2	X				
Maintenance and storage areas are locked when not in use	3	X				
Master flow and drain valve locks so that they remain in the closed position during non-operating or non-standby status.	3	X				
Starter control on the pump associated with the diesel AST is locked and in the “off” position and accessible only to authorized personnel when fuel pump is in a non-operating or non-standby status.	3	X				
Only authorized personnel can gain access to fuel dispenser	3	X				

BMP	PRIORITY	CURRENT BMPS	NEW BMPS	IMPLEMENTATION SCHEDULE		
				FY 09	FY 10	FY 11
Spill Prevention						
Hazardous Materials Plan for inventoried materials in place.	3	X				
Spill Prevention Control and Countermeasure Plan in place, and addresses petroleum products handled and stored on site.	3	X				
Waste Discharge Requirements (WDR) for residuals management in place, and associated waste management plans developed or under development.	3	X				
Spill control material (e.g., sorbent pads, flexible mats for sealing drains, and brooms) are available, and staff knows how to properly contain and cleanup a spill.	1		X	X		
Implement best management practices associated with the Spill Prevention Control and Countermeasure Plan (hydrocarbons):						
Oil delivery contractors and waste oil removal contractors have their delivery procedures and spill response plans on file with the City, and attached to the SPCC.	3		X		X	
Tank-filling operations are normally conducted during daylight hours, and the driver remains with the truck during the entire loading/unloading operation.	1	X				
Aboveground Storage Tank (AST) is double-walled and meets secondary containment requirements.	1	X				
AST are visually inspected weekly.	2	X				
Periodically test the AST for integrity with not more than two years between tests or when material repairs are completed.	3	X				
Aboveground valves and gauges (fuel dispenser) are visually observed monthly.	3	X				
Oil storage units are kept in good condition, and inspected regularly.	2	X				
Any indication of deterioration or leakage that may cause a spill or accumulation of fuel or oil inside the containment areas will be reported to appropriate personnel.	1	X				
Implement best management practices as described in the Water Production Emergency Management Plan to prevent hazardous-materials releases resulting from internal operations at the plant:						
Fluoride system is designed with secondary.	3	X				
Chlorine-gas storage area is equipped with a leak detector, a leak indicator light outside the building, and an audible alarm sounds a horn. Small, localized release of chlorine gas may also be detected by physical observations including seeing, smelling, or hearing. A Risk Management Plan for Handling Chlorine gas is also implemented.	3	X				
Loading operator and plant staff are present during connection and pumping operations of lime into tanks via internal plumbing into top of tanks inside the Chemical Building. Truck-loading location and connection located outside of building.	2	X				
Section of Chemical Building where lime is stored contains a dust collection system for powdered lime.	3	X				



BMP	PRIORITY	CURRENT BMPs	NEW BMPs	IMPLEMENTATION SCHEDULE		
				FY 09	FY 10	FY 11
Implement best management practices associated with the Accidental Discharge Plan required by the WDR:						
BMPs (gravel bags, sand bags, straw bails, wattles, and inlet covers) are readily available and staff is trained on proper installation, inspection and maintenance of these BMPs.	1		X	X		
Residual lagoons will be inspected weekly during the rain season for any type of potential accidental spills from the lagoon areas that may impact the drainage collection system, and the lagoons and temporary storage locations will be inspected monthly during the dry months.	1		X		X	
Lagoon areas will be inspected daily for tracking or accidental spills during hauling operations.	2		X	X		
Residual hauling routes are to be swept after hauling has been completed.	1		X	X		
Most loading activities occur inside the lagoons.	1	X				
Mud-laden loader is washed inside a lagoon to minimize tracking on roadways.	1	X				
Solids loaded into truck beds are packed flat by the loader so that solids are at least 3-4 inches below the highest point of the truck-bed sidewall to prevent material from spilling out. If available, solids with higher moisture content are packed on the top layer of drier solids to prevent dust from occurring during transport.	2	X				
Select drain inlets will be vactored annually (each November).	2		X		X	
To ensure decant-water is always adequately controlled within the plant's containment areas, there is on-site Plant Operations staff monitoring the decant process 24 hrs/day. Plant staff utilizes SCADA controls and operating system which will alarm when a problem is detected.	1	X				
Plant staff visually inspects (using video inspection if necessary) decant equipment periodically.	2	X				
24-hour, on-call maintenance staff are available to fix equipment, piping, and pumps when necessary.	3	X				
The backwash process of the filters only proceeds when the FWW Lagoons are at a level of at most two feet (current regulated level) under the highest overflow elevation.	2	X				
Annual maintenance reviews and inspections of the lagoon decant equipment, piping, and pumps established under the City's Computerized Maintenance Management System (CMMS)	3	X				

BMP	PRIORITY	CURRENT BMPS	NEW BMPS	IMPLEMENTATION SCHEDULE		
				FY 09	FY 10	FY 11
Spill Control and Cleanup						
Implement containment and cleanup practices associated with the Spill Prevention Control and Countermeasure Plan (Hydrocarbons):						
Upon discovery of a spill staff should immediately take appropriate steps to stop the discharge.	1	X				
Apply absorbent material to surface of the liquid, reapplying until all liquid is absorbed.	1	X				
Use cones, tape or signs as needed to isolate spill from human and vehicular contact.	1	X				
Cleanup absorbent material with stiff brooms and shovels and place in approved waste containers.	2	X				
For large spills, call for assistance from the cleanup company which has a formal agreement with the facility as necessary.	2	X				
After completion of cleanup, contaminated absorbents and personal protective equipment will be containerized for transport and disposal in accordance with local, state and federal regulations.	2	X				
Implement containment and cleanup practices as described in the Water Production Emergency Management Plan for hazardous materials releases resulting from internal operations at the plant:						
Emergency response to unexpected release of chlorine gas is only performed by certified, trained employees.	3	X				
Small spills of fluoride can either be allowed to evaporate or can be rinsed down with water.	3	X				
Large spills within the secondary containment structure of the fluoride tanks will need be pumped out and disposed of properly.	2	X				
Small spills occurring within Feed Building will be pumped out into plastic drums and disposed of appropriately.	2	X				
Implement containment and cleanup practices associated with the Accidental Discharge Plan required by the WDR:						
BMPs in place (weighted wattles, staked wattles, inlet covers and gravel bags) to prevent solids from entering the drainage system.	1	X				
Small residual spills are handled with shovels, brooms and/or a sweeper truck.	1	X				
Large residual spills are handled with the loader, shovels, brooms, and a sweeper truck. The spilled residuals are then returned into a truck, lagoon, or storage pile.	1	X				
In the event of a decant-water discharge into the drainage system, Plant Operations will stop the decant process and call maintenance staff to facilitate immediate repairs.	1	X				
After a decant-water-discharge event, any solids remaining in the gutters after filtering through gravel bags and wattles will be removed using a combination of a loader, shovels, brooms, and sweeper trucks (whichever is most appropriate for the clean-up efforts). The solids material will be returned to the functioning lagoon.	1	X				

BMP	PRIORITY	CURRENT BMPS	NEW BMPS	IMPLEMENTATION SCHEDULE		
				FY 09	FY 10	FY 11
Training						
Continually expand knowledge of Best Management Practices	2	X				
Training on FPPP	3	X				
Stormwater Program Training	3	X				
Annual SPCC and precautionary measure training	3	X				

APPENDIX A

1 - Overall Site Exhibit

A				B				C				D				E				F				G				H				I				J				K				L				M				N				O				P				Q				R				S				T				U				V				W				X				Y				Z				AA				AB				AC				AD				AE				AF				AG				AH				AI				AJ				AK				AL				AM				AN				AO				AP				AQ				AR				AS				AT				AU				AV				AW				AX				AY				AZ				BA				BB				BC				BD				BE				BF				BG				BH				BI				BJ				BK				BL				BM				BN				BO				BP				BQ				BR				BS				BT				BU				BV				BW				BX				BY				BZ				CA				CB				CC				CD				CE				CF				CG				CH				CI				CJ				CK				CL				CM				CN				CO				CP				CQ				CR				CS				CT				CU				CV				CW				CX				CY				CZ				DA				DB				DC				DD				DE				DF				DG				DH				DI				DJ				DK				DL				DM				DN				DO				DP				DQ				DR				DS				DT				DU				DV				DW				DX				DY				DZ				EA				EB				EC				ED				EE				EF				EG				EH				EI				EJ				EK				EL				EM				EN				EO				EP				EQ				ER				ES				ET				EU				EV				EW				EX				EY				EZ				FA				FB				FC				FD				FE				FF				FG				FH				FI				FJ				FK				FL				FM				FN				FO				FP				FQ				FR				FS				FT				FU				FV				FW				FX				FY				FZ				GA				GB				GC				GD				GE				GF				GG				GH				GI				GJ				GK				GL				GM				GN				GO				GP				GQ				GR				GS				GT				GU				GV				GW				GX				GY				GZ				HA				HB				HC				HD				HE				HF				HG				HH				HI				HJ				HK				HL				HM				HN				HO				HP				HQ				HR				HS				HT				HU				HV				HW				HX				HY				HZ				IA				IB				IC				ID				IE				IF				IG				IH				II				IJ				IK				IL				IM				IN				IO				IP				IQ				IR				IS				IT				IU				IV				IW				IX				IY				IZ				JA				JB				JC				JD				JE				JF				JG				JH				JI				JJ				JK				JL				JM				JN				JO				JP				JQ				JR				JS				JT				JU				JV				JW				JX				JY				JZ				KA				KB				KC				KD				KE				KF				KG				KH				KI				KJ				KK				KL				KM				KN				KO				KP				KQ				KR				KS				KT				KU				KV				KW				KX				KY				KZ				LA				LB				LC				LD				LE				LF				LG				LH				LI				LJ				LK				LL				LM				LN				LO				LP				LQ				LR				LS				LT				LU				LV				LW				LX				LY				LZ				MA				MB				MC				MD				ME				MF				MG				MH				MI				MJ				MK				ML				MM				MN				MO				MP				MQ				MR				MS				MT				MU				MV				MW				MX				MY				MZ				NA				NB				NC				ND				NE				NF				NG				NH				NI				NJ				NK				NL				NM				NN				NO				NP				NQ				NR				NS				NT				NU				NV				NW				NX				NY				NZ				OA				OB				OC				OD				OE				OF				OG				OH				OI				OJ				OK				OL				OM				ON				OO				OP				OQ				OR				OS				OT				OU				OV				OW				OX				OY				OZ				PA				PB				PC				PD				PE				PF				PG				PH				PI				PJ				PK				PL				PM				PN				PO				PP				PQ				PR				PS				PT				PU				PV				PW				PX				PY				PZ				QA				QB				QC				QD				QE				QF				QG				QH				QI				QJ				QK				QL				QM				QN				QO				QP				QQ				QR				QS				QT				QU				QV				QW				QX				QY				QZ				RA				RB				RC				RD				RE				RF				RG				RH				RI				RJ				RK				RL				RM				RN				RO				RP				RQ				RR				RS				RT				RU				RV				RW				RX				RY				RZ				SA				SB				SC				SD				SE				SF				SG				SH				SI				SJ				SK				SL				SM				SN				SO				SP				SQ				SR				SS				ST				SU				SV				SW				SX				SY				SZ				TA				TB				TC				TD				TE				TF				TG				TH				TI				TJ				TK				TL				TM				TN				TO				TP				TQ				TR				TS				TT				TU				TV				TW				TX				TY				TZ				UA				UB				UC				UD				UE				UF				UG				UH				UI				UJ				UK				UL				UM				UN				UO				UP				UQ				UR				US				UT				UU				UV				UW				UX				UY				UZ				VA				VB				VC				VD				VE				VF				VG				VH				VI				VJ				VK				VL				VM				VN				VO				VP				VQ				VR				VS				VT				VU				VV				VW				VX				VY				VZ				WA				WB				WC				WD				WE				WF				WG				WH				WI				WJ				WK				WL				WM				WN				WO				WP				WQ				WR				WS				WT				WU				WV				WW				WX				WY				WZ				XA				XB				XC				XD				XE				XF				XG				XH				XI				XJ				XK				XL				XM				XN				XO				XP				XQ				XR				XS				XT				XU				XV				XW				XX				XY				XZ				YA				YB				YC				YD				YE				YF				YG				YH				YI				YJ				YK				YL				YM				YN				YO				YP				YQ				YR				YS				YT				YU				YV				YW				YX				YY				YZ				ZA				ZB				ZC				ZD				ZE				ZF				ZG				ZH				ZI				ZJ				ZK				ZL				ZM				ZN				ZO				ZP				ZQ				ZR				ZS				ZT				ZU				ZV				ZW				ZX				ZY				ZZ			
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APPENDIX B

Spill Prevention Control & Countermeasure Plan

1. The first part of the document is a list of the names of the persons who have been appointed to the various positions of the Board of Directors of the Corporation.

2. The second part of the document is a list of the names of the persons who have been appointed to the various positions of the Board of Directors of the Corporation.



City of Sacramento
California
Department of Utilities



Plant Services Division

1395 35th Avenue
Sacramento, CA 95822

**Sacramento River
Water Treatment Plant
Spill Prevention Control
and Countermeasure Plan**

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Table 1 - Bulk Storage Tanks

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Emergency and Agency Telephone Numbers

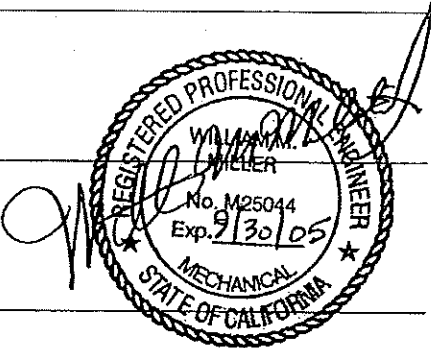
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Facility Site Map

Section 1: SPCC Plan Review – 40 CFR 112

In accordance with 40 CFR 112.5(b), a review and evaluation of this Spill Prevention Control and Countermeasure Plan (SPCC Plan) is conducted at least once every five years. A registered professional engineer, in accordance with Section 112.3(d), shall certify all substantive technical amendments to the plan. Evidence of these reviews and applicable certifications is recorded in the table below. (Note: Administrative modifications are made, as appropriate, to ensure the accuracy of plan information in response to modifications in the assignment of personnel or contact information [e.g., telephone numbers]).

Date	Reason for Review	SPCC Coordinator's Name and Initials	Professional Engineer's Name and Initials
7-3-04		<i>Kan</i> Kathy Mullen	WILLIAM M. MILLER, JR <i>Bm</i>



Section 2: Management Approval – 40 CFR 112.7

This SPCC Plan is fully approved by the management of the City of Sacramento, Plant Services Division, which will provide all the necessary funds and manpower to fully implement the plan as it is described in this document.

Kathy Mullen
Signature

9-3-04
Date

Kathy Mullen
Name

Water & Sewer Supt.
Title

Section 3: Facility Information

Facility Name: Sacramento River Water Treatment Plant

Telephone Number: (916) 808-4961

Facility Address: 1 Water Street
Sacramento, CA 95814

Latitude and Longitude: 38.5919, -121.5026

Owner/Operator Name: City of Sacramento
Sacramento River Water Treatment Plant
1 Water Street
Sacramento, CA 95814
Sacramento County
(916) 808-4961

Contact Name and Title: Kathy Mullen, Water and Sewer Superintendent

Contact Telephone Number: 916 808-3105

Facility Description: The Sacramento River Water Treatment Plant is a drinking water treatment facility. This treatment plant, located northwest of the City's downtown area and near the confluence of the American and Sacramento Rivers, is a conventional treatment process, denoted by chemical coagulation, flocculation, sedimentation, filtration, and disinfection. The original plant was placed in operation in 1924.

a. Facility Operations

The treatment plant is a 24-hour operation, which takes raw water from the Sacramento River and processes it in to drinking water. The plant is capable of delivering up to 160 million gallons per day.

b. Facility Storage

The treatment plant has one above ground storage tank containing diesel oil. This tank is fuel storage for the large diesel generator. It is located just north of the pump house. The tank has a 6000-gallon capacity and usually contains less than 4000 gallons. It is double walled and provides 100 percent containment. There is a dispensing hose connected to the tank and can be use to refuel

equipment; however, it is not expected to be used for daily refueling. Occasionally, for rotation of fuel, the tank will be used for fueling of equipment. The generator is for emergencies and only for use during power outages. Water must continue to be supplied to the citizens of the City of Sacramento even in emergency situations.

- c. **Drainage Pathway and Distance to Navigable Waters**
The Sacramento Water Treatment Plant is located one half mile east of the Sacramento River and one mile south of the American River. The Sacramento Water Treatment Plant is separated from the Sacramento River by the Interstate 5 freeway.

The only option for a spill to get to the rivers is via the storm drains. There are five storm drainage inlets located near the diesel tank. The three to the north gravity feed to Bercut Drive. The two to the south are further away from the tank (about 40 yards) and are less likely to be involved if there was a spill. Therefore, in the unlikely event of a catastrophic release, all storm drains will be protected, either by sandbags, plastic or some other way.

List of Aboveground Storage Tanks:

Tank I.D.	Volume (gallons)	Contents
Generator fuel tank	6000	Diesel
55 gal drums	550	oil
Total Volume:6550		

Section 4: Spill History – 40 CFR 112.4(a)

The Sacramento River Plant has experienced no known spill event, as defined in 40 CFR 112.1(b).

Section 5: Potential Discharges – 40 CFR 112.7(b)

Source	Type of Failure	Volume	Rate	Direction of Flow	Containment
Diesel storage	Rupture of primary containment; leakage.	6000	Rate of flow will vary.	Flow will move to the west and north on Bercut.	Oil absorbent booms will be placed around the spill area and pumped into drums. Mats will be used to seal storm drains.
Primary truck loading operations.	Leakage at hose connection.	Capacity of recovery truck: 6,500 gallons (max)	Rate will vary depending on delivery system and pumping capacity.	Flow will move to the west and north on Bercut.	Curbs, gutters and street grade provide containment when drain inlet mats are in place.
Oil storage room.	Barrels rupture or tip over.	A maximum of 10 drums of 55 gallons each.	About 1 gallon per minute.	All directions. Floor is level.	Drums are stored atop portable secondary containment vessels.

Section 6: Containment and Diversionary Structures
 -40 CFR 112.7(c) and (d)

Secondary containment and diversionary structures at Sacramento River Water Treatment Plant are described in Table 1. ASTs are double-walled tanks and meet the secondary containment requirement. In addition to visual inspections, the facility will periodically test the ASTs for integrity (40 CFR 112.8(c)(6)). Test shall occur not more than two years between tests or when material repairs are completed.

A spill of 110 gallons or less at this facility would generally be contained within the paved facility boundary and would require implementation of cleanup measures. Spill control material (e.g., sorbent pads, flexible mats for sealing drains, and brooms) are available at the facility in a spill response kit.

A demonstration of impracticality in accordance with 40CFR 112.7(d) is not applicable.

Section 7: Applicable Guidelines – 40 CFR 112.7 and 112.8

7.1 Facility Drainage – 40 CFR 112.8(b)(1)

7.1.1 Facility Drainage Systems from Diked Areas

Storm water flows by sheet flow, into various Stormwater drainage inlets located in and around areas of the facility. Potential pollutants (oil, unleaded gasoline and diesel) are accumulated and would flow, by sheet flow, into drainage inlets to the City's storm water collection system if unchecked.

7.1.2 Final Discharge of Drainage

Stormwater sheet flows enter various Stormwater drainage inlets located in and around areas of the facility. Potential pollutants (oil, unleaded gasoline and diesel) are accumulated and would flow, by sheet flow, into drainage inlets to the City's combined sanitary sewer collection system.

7.1.3 Facility Drainage Systems and Equipment

Washwater generated during equipment cleaning activities flows to a sump equipped with an oil/water separator. Washwater enters the oil/water separator prior to discharging to the City's combined sewer collection system. Stormwater gravity flows to Bercut Drive, where it enters the City's storm water collection system.

7.2 Bulk Storage Tanks – 40 CFR 112.8(c)(2)

7.2.1 Material and Construction

Fuel and oil storage ASTs located onsite are described in Table 1. This table includes the storage content, size, materials or construction, and fail-safe engineering features of each tank onsite.

All tanks reportedly are constructed according to American Petroleum Institute, American Society for Testing and Materials, or Underwriters Laboratory specifications. Tank materials and construction reportedly are compatible with the stored products at the temperature and pressure at which storage occurs.

7.2.2 Secondary Containment

Secondary containment for each tank is described in Table 1. All of the ASTs are double-walled tanks constructed in accordance with nationally accepted industry standards.

7.2.3 Drainage of Stormwater

Stormwater runoff discharges off the roof of the buildings and from direct surface deposition onsite. Stormwater sheet flows to the drop inlets located throughout the facility. Runoff from the ground also discharges to drop inlets discharging to the City's storm collection system.

7.2.4 Underground Storage Tanks

Underground storage tanks are not located at the facility.

7.2.5 Partially Buried Storage Tanks

Partially buried storage tanks are not located at the facility.

7.2.6 Aboveground Storage Tanks

Visual inspections of the tanks will be performed weekly during normal activities at the facility. Aboveground valves and gauges will be visually observed monthly. Any indication of deterioration or leakage that may cause a spill or accumulation of fuel or oil inside the containment areas will be reported to appropriate personnel. A documented inspection of the tanks and secondary containment systems will be completed monthly. Tank inspections and any corrective action work orders will be tracked using AST inspection forms. Completed inspection forms will be kept in the facility's office files and retained for at least three years.

In addition to visual inspection, the facility will periodically test the ASTs for integrity. Testing shall occur with not more than two years between tests or when material repairs are completed.

7.2.7 Heating Coils

Tanks equipped with heating coils are not located at the facility.

7.2.8 Fail-Safe Engineering

The generator fuel storage tank is equipped with gauges to determine the fill levels and to detect leaks between the inner and outer walls. Float gages are located at the top of the tank to indicate fluid levels.

7.2.9 Visible Oil Leaks

If visible oil leaks from tank seams, gaskets, rivets and bolts are observed that may cause significant accumulation of oil in containment areas, any oil will be promptly cleaned and leaks will be investigated and corrected.

7.2.10 Mobile or Portable Oil Storage Tanks

Fifty-five gallon drums containing oil, lubricants or anti-freeze are stored at the facility in the oil storage building (Figure 1). If a leak were to occur, the spill would be contained by the secondary containment pallets first, and the buildings secondary containment curbs second. Spilled product would be removed by using a portable pump and/or absorbent materials.

7.3 Facility Tank Car and Tank Truck Loading/Unloading – 40 CFR 112.7(h)

Tank truck loading/unloading procedures meet the minimum requirements and regulations of the U.S. Department of Transportation. The driver remains with the truck during the entire loading/unloading operation.

The primary tank truck loading/unloading area is located at the tank. The area is paved and drains to drop inlets. These inlets will be sealed with rubber mats during transfer operations.

Signs will be posted reminding drivers not to overfill or “top off” their tanks and to prevent vehicles from departing before complete disconnection of flexible or fixed transfer lines. Additionally, drains and outlets on tank trucks are checked for leakage before loading/unloading or departure.

7.4 Inspections and Records – 40 CFR 112.7(e)

Inspections are conducted on a monthly schedule in accordance with written procedures developed for this facility. Completed forms are to be maintained by Maintenance Personnel for at least three years.

7.5 Security – 40 112.7(g)

The facility is equipped with the following security measures:

- The entire facility is fully fenced and the entrance gates are locked when not in use.
- Tank-filling operations are normally conducted during daylight hours and maintenance staff periodically inspects oil storage and fueling areas.
- Master flow and drain valves have locks so that they remain in the closed position during non-operating or non-standby status.
- Starter controls on each pump are locked and in the “off” position and accessible only to authorized personnel when pump is in a non-operating or non-standby status.

7.6 Personnel, Training and Spill Prevention Procedures – 40 CFR 112.7(f)

The facility has determined that Operations and Maintenance will be accountable for oil spill prevention. The designated person is Steve Willey.

The SPCC Plan will be included in the Operations/Maintenance Training Program. A training sign-off sheet for attendance of this training will be included at the completion of every training session. Records of training will be kept in the division’s “Training Tracker Software”.

Once a year, training will include the SPCC Plan and will provide training in known spill events or failures, malfunctioning components, and recently developed precautionary measures.

Section 8: Spill Contingency Plan

8.1 Authorities and Responsibilities

The following discussion defines the authorities and responsibilities of personnel as they pertain specifically to spills and associated emergencies.

8.1.1 Primary Emergency Coordinator

The Primary Emergency Coordinator is Steve Willey. The Primary Emergency Coordinator is responsible for coordinating emergency response measures at the facility. The Primary Emergency Coordinator is familiar with the facility's contingency plan, operations and activities at the facility, the location of records for the facility and the facility layout. This person has the authority to commit resources needed to carry out the contingency plan and the responsibility to respond to the emergencies as described in this SPCC Plan.

8.1.2 Alternate Emergency Coordinators

In the event of an emergency in which the Primary Emergency Coordinator is not available, Mary Krizanosky, assumes the role of Alternate Emergency Coordinator. The Alternate Emergency Coordinator will coordinate with the Primary Emergency Coordinator or act in their behalf. The Alternate Emergency Coordinator is familiar with the facility's contingency plan, operations and activities at the facility, the location of records for the facility and the facility layout. This individual also has the authority to commit the resources needed to carry out the contingency plan and the responsibility to respond to the emergency as described in the SPCC Plan.

8.1.3 Employee at the Scene

Employees are instructed to call the Primary Emergency Coordinator, or the Alternate Emergency Coordinator, when a spill is observed and take preventive measures to control the spread of spilled material.

8.2 Response Procedures for Spills

8.2.1 Notification

Upon discovery of an oil spill, the Emergency Coordinator is to be notified. The Emergency Coordinator will contact the Emergency Response Contractor, and the appropriate government agencies, when it is a non-contained reportable spill of 42 gallons or more. Spills are not reportable if they occur within an impervious surface or are otherwise contained. The Emergency Coordinator will prepare written reports required by the agencies.

8.2.2 Evaluation and Initiation of Action

The Emergency Coordinator must gather as much information as possible to assess the magnitude and severity of the spill in order to initiate appropriate cleanup actions and provide required information to the response contractor. The Emergency Coordinator should perform the following:

1. Upon discovery of a spill, attempt to keep the situation from worsening by:
 - a. Contacting a second person to assist.
 - b. Immediately stopping the source of the discharge. This may involve:
 - Shutting off equipment or pumps;
 - Plugging a hole in operating equipment or a tank; or
 - Closing a valve.
 - c. The following containment techniques should only be performed by personnel who are appropriately trained:
 - Prevent discharge into storm drains by sealing off with drain covers, absorbent socks and /or granular absorbent material.
 - Apply absorbent to the surface of the liquid and reapply until liquid is absorbed.
2. Attend to any injured personnel. Administer First Aid if you have been trained and certified in First Aid. Otherwise, call an ambulance or paramedic.
3. Assess the possible immediate hazard to human health and take appropriate actions:
 - a. Isolate spill from human and vehicular contact by using cones, tape and posting signs. Instruct personnel not involved with the cleanup operation to leave the area.
 - b. If the emergency threatens the health or safety of personnel, instruct employees to evacuate and contact the supervisor/manager and safety coordinator immediately.
 - c. If the emergency threatens human health outside the facility boundaries, or the spilled quantity is greater than 42 gallons, Emergency Coordinator must notify local authorities. The State Office of Emergency Services and the local emergency assistance organizations (listed in Sections 8.2 and 8.3) are to be notified.
4. Brief emergency response personnel on the nature and quantity of spilled material.
5. Implement prompt cleanup and disposal actions to remove the spilled substance, as well as contaminated soil or other materials.

8.2.3 Cleanup and Disposal

1. Cleanup

Cleanup efforts must be undertaken to restore the affected area to its pre-spill condition.

For small spills, which may be encountered during fuel transfer or normal maintenance operations, absorbent socks will be used to contain the spill, and granular absorbent will be applied and reapplied until there is enough to absorb the liquid. This material will be picked up with stiff brooms and shovels and be placed in approved waste containers for disposal in accordance with applicable regulations.

For larger spills, the Emergency Coordinator will call for the assistance of the cleanup company that has a formal agreement with the facility. The cleanup company will be directed to remove free product from catch basins or containment areas utilizing pumps, booms, and absorbent pads as appropriate.

2. Disposal

After completion of cleanup, contaminated absorbents and personal protective equipment will be containerized for transportation and disposal in accordance with local, state and federal regulations.

8.2.4 Documentation

Reportable spills greater than 42 gallons will be documented. The following facts about the spill will be recorded:

1. Location of the incident;
2. Time, date and duration (hours) of spill;
3. Source(s) of spill;
4. Description and quantity of product spilled;
5. Cause(s) of spill, including a failure analysis of system in which the failure occurred;
6. Resources affected or threatened by the spill; and
7. Description and status of cleanup efforts.

8.3 Cleanup/Disposal Resources

The following local authorities will be called for assistance, if needed, during and emergency:

Local Agency	Telephone No.
Ambulance/Paramedics	911
Fire Department	911 or (916) 433-1300
Police	911 or (916) 264-5471
Hospital – UCD Medical Center	911 or (916) 734-2011
Spill Response Contractor	
Ramos Environmental	(916) 371-5747
City of Sacramento Hazardous Material Division	(916) 264-7070
Office of Emergency Services	(800) 852-7550

8.4 Cleanup/Disposal Resources

The following firm(s) will be called, if needed, to assist with cleanup and disposal operations:

Local Agency	Telephone No.
Ramos Environmental	(916) 371-5747
City of Sacramento Hazardous Material Division	(916) 264-7070

Table 1. Bulk Storage Tanks

Aboveground Storage Tanks

Tank No.	Size (gal)	Contents	Materials or Construction	Fail-Safe Features	Containment	Containment Size (gal)
1	6000	Diesel fuel	Steel		Double Wall Construction	>6000

Mobile/Portable Storage Tanks

Tank Type	Size (gal)	Number at Facility	Contents	Location	Containment	Containment Size (gal)
drum	55	10	oil	adj. to Mach..Lunch Rm		

Figures

Map of Sacramento River Water Treatment Facility

Appendix A: Emergency and Agency Telephone Numbers

Emergency and Agency Telephone Numbers

Agency	Contact Person	Bus. Phone	24-hour Phone
City of Sacramento, Primary Emergency Coordinator	Stephen Willey, Supervising Plant Operator	916-808-7406	916-264-5011
City of Sacramento, Alternate Emergency Coordinator	Mary Krizanosky, Supervising Plant Operator	916-808-3111	916-264-5011
City of Sacramento, Department Public Information Officer	Jessica Hess, Public Information Officer	916-808-8260	916-264-5011
Ambulance/ Paramedics		911	911
City of Sacramento, Fire Department		916-433-1300	911
City of Sacramento, Police Department		916-264-5471	911
UCD Med Center		916-734-2011	911
National Response Center			800-424-8802
State Office of Emergency Services			800-852-7550
County Office of Emergency Services			916-874-4670
Regional Water Quality Control Board			916-434-3291
California Air Resources Board			916-322-0476
Department of Toxic Substance Control			916-324-1826
California Environmental Protection Agency			916-445-3846
Cal OSHA – for serious injuries or death			916-263-2800

